THE JOURNAL of the Oklahoma State Medical Association

VOLUME XI MUSKOGEE, OKLA., APRIL, 1918 NUMBER 4

Appendicitis

INFLAMMATION OF THE ABDOMINAL TONSIL.

The Importance of Early Diagnosis.

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A few years ago Robt. T. Morris wrote an article on Perineal Repair, and gave it the title of "The Office Boy Operation". This was done, I presume, to call attention to its simplicity, and to attract the reader to an old and much written about condition. In this connection I felt that so much has been written on appendicitis, that the subject is becoming rather stale, and many who should read it, would fail to do so hence, I adopted the above title, taken from Morris' Human Anatomy[1], in which he says "The appendix is essentially a lymph gland and has been called the abdominal tonsil." The writer feels that most men think that enough has been said on this subject, and that further discussion is not only useless but superfluous. In order to show that enough has not been said along this line I desire to quote rather fully from the works of the late lamented Murphy[2]. Just a few years ago he published in his clinics a picture of a gangrenous appendix, with one of his admirable talks. A few weeks later he was taken to task by another for doing so, saying that it was ancient history. Here is his answer, "Just recently a critic took a Chicago surgeon to task in the columns of a medical journal because the latter had published a colored picture of a gangrenous appendix. The writer intimated that appendicitis was ancient history. It IS ancient history; but does that mean that all practitioners are master of the situation or that the disease is efficiently handled at the present? If you will look up the statistics on the results of operations for appendicitis, you will find the average mortality rate in hospitals to be a little over 10 per cent. These are not individual surgeon's statistics, but the statistics of hospitals where the leaders of the profession operate. They include the statistics of all cases of this disease brought to the hospital. Is it time to stop talking about appendicitis? No, it is just time to begin, and talk most seriously and emphatically about it". Since the mortality is much too great, there must be a good reason for it, and that reason is delay in diagnosis, or procrastination after the diagnosis is made. Every case of appendicitis allowed to go on to suppuration with its high mortality rate is an indictment of the physician, if called in early, or of the patient if he refuses operation. It is the opinion of the writer that the great majority of acute cases present a very constant clinical syndrome, and one which can hardly mislead. It is better to be mistaken in the diagnosis than to mistake the disease, so when in doubt call consultation, *don't delay.*

(1) Morris Human Anatomy, page 1378.
(2) Clinics, June, 1915.

The attack of acute appendicitis usually begins with a more or less severe epigastric pain, following six or eight hours after a heavy and, usually, very indigestible meal. The writer has found this to be true in practically all of his cases seen in the past two years. Following this pain, nausea ensues, with vomiting in the great majority of cases, but not all. The pain finally localizes over the right lower abdominal quadrant, the rectus becomes rigid, tenderness over McBurney's point is pronounced, and the patient has a *rise of temperature*. Without the rise of temperature, we should hesitate to pronounce it appendicitis; but with all of the above symptoms combined with even the slightest rise in temperature, we could without much fear of error call it an acute attack. The position of the organ intra-abdominally will often mask some of the signs and may lead one into error. For instance, some very severely inflamed appendices which are situated retrocecally may fail to give muscle rigidity or tenderness over McBurney's point, but deep pressure in the lumbar region will elicit tenderness: this with the history should place you on your guard. At this time a blood count will be of value, but the count must be a differential, instead of the absolute only. In a very exhaustive article by Hewitt[3], he draws the following conclusions as to the relative value of the blood count in this disease.

"First: The absolute count, when taken alone, is of questionable value.

"Second: The polynuclear count alone is, in the majority of instances, a reliable index of diagnosis.

"Third: That the correlated absolute and polynuclear are of greater value than either count taken alone, especially as regards prognosis.

"A high absolute count with a high polynuclear count usually means a good prognosis (e. g., absolute 35000, polynuclear 95 per cent.) A high absolute (30000) with a moderately low polynuclear (80 per cent.) usually means a very good prognosis. A low absolute (7000) with a high polynuclear (95 per cent.) indicates a grave prognosis (generally speaking). A low absolute count (7000) with a low polynuclear (65 per cent.) usually indicates no infection, or that the infection, if one be present, has not stimulated the resisting powers of the body sufficiently to produce a leucocytosis.

"Fourth: Normal or subnormal figures do not necessarily indicate the absence of suppuration or its sequels.

"Fifth: Catarrhal cases, fulminating cases, moribund cases and walled off abscesses frequently do not stimulate leukocytosis".

Hewitt further says: "The surgeon who attempts to use the blood count in appendicitis as a definite diagnostic sign will soon run afoul of diagnostic disasters, but he who regards it only as a symptom invariably to be correlated with equally, if not more important clinical manifestations, cannot fail to find this method of inquiry of signal value in routine clinical surgery." The question of appendicitis, as a complication of other diseases and as mistaken diagnosis is one of importance. In the female right side salpingitis is frequently mistaken for appendicitis: if the appendix lies in the usual anatomic position in the abdomen, it is in close apposition to the right ovary and tube and any inflammation of these can and does involve this organ very frequently, but this is a secondary condition and not a primary one, and the symptoms will not be those of an acute attack, as outlined before. It is surprising how many cases of salpingitis are diagnosed appendicitis when there is involvement of the tube only. Most of these secondary appendix involvements take on the character of a chronic inflammation. On the diagnosis in this condition Morris[4] says, "About an inch and a half to the right of the navel and a trifle caudad, one will find on deep pressure a hypersensitive point in cases of one of four kinds. This tender point does not belong to cases of acute appendicitis. It does not belong to cases of pelvic irritation or infection, except in company with a similar tender point to the left of the navel. This tender point to the right of the

(3) Annals of Surgery, August, 1917, page 143.

navel will serve to give differential diagnosis between cases of chronic appendicitis and various pelvic irritations or infections." His conclusions are fully given in the article quoted. From a frequent use of this sign, the writer can concur in the findings of Morris.

It is surprising how often right renal colic is mistaken for appendicitis. It does not seem to the writer as though this mistake should be made as frequently as it is, since the signs are to his mind very unsimilar. The pain is of an excruciatingly severe character, cutting, spasmodic usually, passes down from the kidney region, into the vulva or scrotum as the case may be, and there is generally some bladder irritation. There is seldom, if ever, any nausea or vomiting, epigastric distress as a prodrome is very generally absent, and there is in the early stages, *no rise of temperature*. There might or might not be any leukocytosis, but the irritation might cause an increased absolute count, and here the differential would solve the riddle. There is at times tenderness on deep palpation over the ureter in the region of McBurney's point.

Appendicitis in children may be mistaken for pneumonia and vice versa. It is a most serious disease in childhood, because of the anatomical fact that the omentum in the child is small and not fully developed, hence, does not afford any protection to the general pelvic cavity, during the attack, and a diffuse peritonitis very promptly ensues upon rupture, unless the appendix is situated retrocecally, in which instance the abscess may localize post-cecal and thereby be shut off from the general cavity. Because the child is very young is no reason why it will not have appendicitis. There has recently appeared in the literature a case of operation on a child six weeks old. The writer has recently operated on a boy six years old, in which the only symptoms were pain in the stomach and tenderness over McBurney's point. This was a case in which the question of a pneumonia arose. The writer urges the general practitioner to keep the fact in mind that appendicitis in infancy and childhood does occur with no great infrequency.

The matter of appendicitis complicating typhoid fever, or mistaken for it, is one of great concern. It has been no infrequent occurrence for a typhoid case, in its early stages, to have been subjected to an unnecessary and very dangerous operation, because of a mistaken diagnosis. The writer must confess that he does not know how to avoid this mistake. It would seem that only by the most careful and painstaking analysis of the clinical symptoms and history in these cases can we avoid error, and even then it will occur, as shown by the fact that at Johns Hopkins the mistake has been made more than once.

Finally, there is one other condition in which a *very* early diagnosis is of the greatest importance, and that is, in pregnancy: Pregnancy with appendicitis, says Murphy[5], "Is one of the most dangerous conditions that occurs in the lower abdomen. With appendicitis in pregnancy, there is a colossal mortality percentage when one does not operate, and only a slightly lower one when one does operate, except in the cases which are operated on in the first few hours of the attack, before the disease has become a constitutional infection; that is, before the pus has been absorbed into the circulation, and the microorganisms are circulating in the blood. If a local abscess forms, the danger of a general peritonitis is very great. In the third and fourth months of pregnancy the intestines and omentum have been pushed out of the field by the growing uterus, where they protect the caput coli, and so cannot care for the inflamed appendix, (the writer does not believe that the uterus is high enough in the pelvis at these months to raise the intestines or omentum out of the field), consequently there is a marked tendency to the development of a fulminant peritonitis. The mortality of cases not operated upon has been shown by Wagner to be 77 per cent.; while in cases operated during the first 48 hours, the mortality is only 6 per cent. The mortality can certainly be reduced if operated on within the first 24 hours of the attack. From this you

(4) Journal A. M. A., December 15, 1917, page 2036.
(5) Clinics J. B. M., December, 1914.

you will see how very necessary it is to be on the lookout for the disease in your pregnant patients. Early diagnosis means a life saved, perhaps we had better say two lives: The *least* delay spells for an awful catastrophy.

There has been nothing new said in this hastily written article, but the writer is sure that some good may come from it, if perchance it might save just one life, which otherwise might have been sacrificed. I may in conclusion quote this little bit:

"I have gathered a posie of other men's flowers
And nothing but the thread that binds them is mine."

TUBERCULOSIS OF THE KIDNEY.

By DANIEL N. EISENDRATH, A. B., M. D., Chicago, Illinois.

LIST OF ILLUSTRATIONS.

Fig. 1. Advanced stage. Nephrectomy in the sixth month of pregnancy.
Fig. 2. Section of advanced tuberculous pyonephrosis.
Fig. 3. Tuberculosis of kidney.
Fig. 4. Typical appearance of bladder in tuberculosis of kidney.

The object of this paper is primarily to direct the attention of the general practitioner to a disease for which he, as a rule, is first consulted. If I can succeed in showing that a more careful examination should be made of every patient who has symptoms of cystitis and does not improve after treatment, I will feel that this paper will not have been written in vain. It will be my object to show that tuberculosis of the urinary tract begins almost without exception in one kidney, the organism being carried there through the blood supply of that kidney. If we can educate the men who first *see* these cases to consult some one who is trained in the special methods *essential* to making a diagnosis of a surgical lesion of the kidney, I feel confident that the sad story told us almost daily, of the existence of typical symptoms for months and years, will be greatly changed.

Let us take up the subject in a somewhat systematic manner. First, consider the pathological changes which the kidney undergoes as a result of its invasion by the tubercle bacilli.

Pathology. By tuberculosis of the kidney the surgeon invariably refers to that form in which one or more foci are present in a chronic form in the kidney. We exclude from consideration those forms of tuberculosis of the kidney which are, as a rule, an accompaniment of a generalized miliary tuberculosis in which both kidneys are the seat of hundreds of miliary tubercles whose presence does not give rise to symptoms which can be differentiated from those due to the involvement of other organs such as the lung, spleen, liver, brain, etc., the clinical picture of which is familiar to every internist. This form of tuberculosis of the kidney in which we are interested is, as a rule, of gradual development. Occasionally one encounters cases (as I shall mention under the heads of the various groups of clinical pictures which one encounters) which apparently have an acute onset with chills and fever; with the symptoms resembling those of an acute non-tuberculous affection of the kidney. I have seen three such cases in which the infection with the tubercle bacilli was complicated by one due to the ordinary pyogenic organisms such as the bacillus coli and the staphylococcus pyogenes aureus picture to such an extent as to give rise to the impression that the disease had an acute onset. I have found but few references in the literature to the possibility of certain cases of tuberculosis of the kidney appearing in an acute form such as these cases just referred to.

Aside from these apparently acute cases practically every invasion of the kid-

Fig. 1. Appearance of kidney in a case of early tuberculosis of the organ.
(*A*). Section of kidney showing ulcer of papilla (tuberculous papillitis) and formation of a small cavity adjacent thereto in parenchyma of the upper pole. At the lower pole one sees a still earlier stage of ulcer of the papilla. Note also the miliary tubercles scattered over mucous membrane of renal pelvis.
(*B*). Appearance of exterior of same kidney showing a large number of groups of tubercles scattered over its surface.

Fig. 2. Intermediate stage of tuberculosis of the kidney. Note how lower half of parenchyma has been destroyed and also a large portion of the upper half.

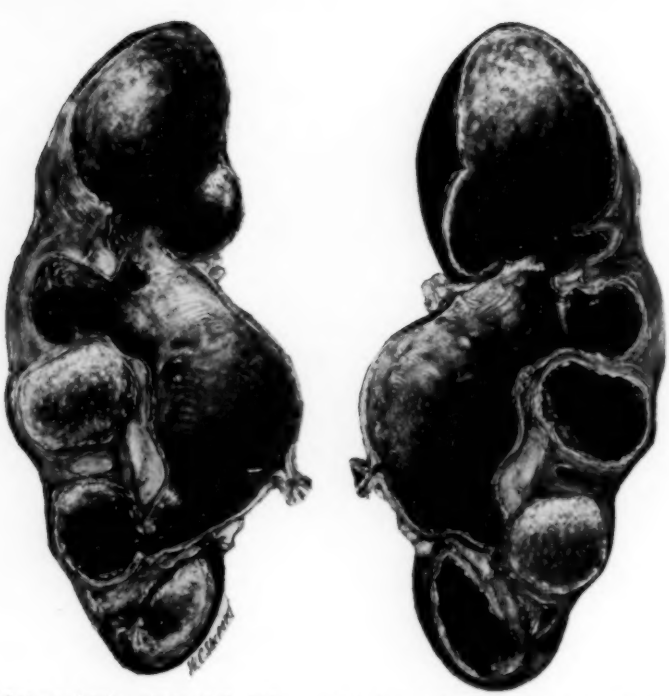

Fig. 3. End stage of tuberculosis of the kidney. Note how entire parenchyma is replaced by a series of cavities which were filled with caseous detritus.

Fig. 4. Typical appearance of bladder in a case of tuberculosis of the kidney. Note gaping character with raised edematous edges of the ureteral orifice giving it somewhat the appearance of a golf hole. In the vicinity of the ureteral opening are a number of miliary turbercles, and to the left and below is a typical tuberculous ulceration.

ney by the tubercle bacillus which is amenable to surgical treatment, is one in which the changes are of such a gradual, insidious nature that the entire kidney may be destroyed before clinical symptoms result. This is especially true if the ureter becomes closed at an early stage or the foci do not communicate with the renal pelvis so that no pus from the involved organ escapes into the bladder and causes a secondary change here.

There has been considerable discussion as to which portion of the kidney is the primary area of localization of the tubercle bacilli. The work of Wildbolz has shown conclusively, however, that the first evidence of disease manifests itself near the base of the papilla where one of the divisions of the renal pelvis is reflected upon the surface of the papilla. Here the urinary stream is slowest and all conditions are favorable to lodgement and growth of the organism. The changes incident to such lodgement of the tubercle bacilli do not differ from those characteristic of tuberculosis in other portions of the body. The formation of tubercles, caseation, and resultant cavity formation produces a more or less extensive erosion of the papilla (Fig. 1). From this focus the entire kidney is invaded by way of the intrarenal lymphatics or blood vessels so that at a comparatively early stage it is extremely difficult to say which was the primary area of localization. The entire parenchyma shows typical tuberculous cavities which vary in size so that in the early cases there is still considerable tissue left between the individual cavities, while in the later stages the entire parenchyma has disappeared and is replaced by a series of cavities (Figs. 2 and 3) filled with a caseous detritus and separated from each other by connective tissue septa. This advanced stage is sometimes referred to as the tuberculous pyonephrosis or putty kidney, and is really a form of autonephrectomy. The latter condition is no doubt the one found in practically every tuberculous kidney which has been treated medically and in which the physician in charge boasts of a nonoperative cure. There being no longer any tissue to destroy and no communication with the renal pelvis, in the majority of such cases symptoms cease and an apparent cure is boasted of. Even under these conditions the presence of such a caseous kidney or tuberculous pyonephrosis, as it is sometimes spoken of, is a constant menace to the individual and I have encountered cases in which the opposite kidney was the seat of an advanced interstitial nephritis and there was a generalized miliary tuberculosis which had resulted from such an apparently dead kidney.

I have described the most frequent form of pathological change in the tuberculous kidney, but it is necessary to take into consideration the effects of such tuberculous invasion upon other portions of the urinary tract in order to get a clear idea of the importance of clinical symptoms.

As a result of the tuberculous ulceration of the papilla, the bacilli are discharged into the urinary stream and cause typical tuberculous changes in the renal pelvis, ureter and bladder. The changes characteristic of tuberculosis of the mucous membranes in other parts of the body take place wherever urine ladened with tubercle bacilli touches, and varies from simple invasion with submucous miliary tubercles to more or less extensive ulcerations. If such an ulceration happens to occur at the point where the ureter empties into the renal pelvis or further down in the ureter, secondary cicatricial changes may occur resulting in strictures at any point along the course of the ureter from its opening into the bladder to its junction with the renal pelvis. The sequel of such a stricture varies as elsewhere in the body with its degree of permeability, but not infrequently one encounters cases in which the entire ureter and renal pelvis are greatly dilated as the result of the back pressure above the point of stricture, or as in one of my cases, a typically large hydronephrosis is found, the tuberculous nature of which is not discovered except after most careful examination of the specimen.

The secondary changes in the bladder are, as a rule, most marked around the ureteral orifice of the side affected, and if operative relief does not come at an early period of the disease the tuberculous ulcerations may be found over the en-

tire bladder. Soon the opposite ureter becomes involved and the tubercle bacilli begin to ascend toward the healthy kidney by way of the lymphatics in the wall of the ureter, as Bauerisen has so clearly shown. The changes in the opposite kidney are exactly those described for the primarily invaded kidney, except that the pathological changes are at first most marked in the pelvis, and then invade the parenchyma. The second or healthy kidney is not invaded in the majority of cases by the mode of ascending infection which I have just described until a comparatively late period, and it is this one fact in the pathology of tuberculosis of the kidney to which I wish to especially direct attention because this is the foundation stone of our modern treatment of tuberculosis of the kidney. If we can make a diagnosis before the opposite kidney is involved, we can promise complete recovery in seventy-five per cent. of the cases. If, however, the diagnosis is not made and the second kidney is already involved, the case is an absolutely hopeless one.

The less important and infrequent changes in tuberculosis of the kidney are a massive invasion of the organ similar in its widespread involvement to the diffuse acute caseous infiltration of a single lobe or even of the entire lung which one occasionally observes. Another peculiar but rare feature of renal tuberculosis is the tendency of the perinephritic tissue to become enormously thickened as the result of the same type of fibrous hyperplasia which is seen in the hyperplastic forms of tuberculosis of the cecum. In children, but less often in adults, the first clinical evidence of a tuberculosis of the kidneys may be the presence of a perinephritic abscess with or without external fistula, which is at times very difficult to differentiate from a psoas abscess of spinal origin. The ureter becomes greatly enlarged as the result of a diffuse infiltration of all of its coats and is often so thick that it can be felt through a thin abdominal wall or through the vagina.

That chronic tuberculosis of the kidney is invariably secondary to a primary focus elsewhere in the body there is no longer any doubt, but in the majority of cases the primary localization presents no symptoms. Pulmonary tuberculosis of the chronic type is very often complicated by a unilateral tuberculosis of the kidney and such a pulmonary condition is one of the contra-indications to removal of the kidney. To sum up, we are dealing with a very slowly progressive invasion of the kidney, the bacilli being carried by way of the blood stream as a rule to only one kidney and the invasion of the remainder of the urinary tract, including the opposite kidney, being secondary. If we can only eradicate the old notion that tuberculosis of the urinary tract begins in the bladder and spreads upward and that the symptoms of cystitis which the majority of the patients present as the predominating feature of the clinical picture, are the effect and not the cause, much will be accomplished toward securing a clearer idea of what we can do for these otherwise hopeless cases by early removal of the only kidney which is involved.

(To be continued in May Journal)

DETECTION OF GALL-STONES.

G. L. McWhorter, Chicago (*Journal A. M. A.*, March 6, 1918), advises the use of a waxed tipped filiform bougie for probing the bile ducts for stones that might otherwise be overlooked. The wax tip consists of from one-half to one part olive oil and one part dental wax, both thoroughly sterilized. The wax tip has been used in probing for ureteral stones and has been recommended by Harris as late as 1912, but its use in the bile ducts has not been previously described. The wax tip should be examined under a lens before using as well as after. If while passing the wax tip a decided jump should be felt, such as might be caused by a partly ensacculated stone, the chances of obtaining a definite scratch are improved by moving it back and forth several times.

RECENT ADVANCES IN THE DIAGNOSIS AND TREATMENT OF PNEUMONIA.*

By O. J. WALKER, M. D., Oklahoma City, Oklahoma.

The important place that pneumonia occupies among our infectious diseases and the crying need of effective treatment is now generally recognized. Pneumonia as the cause of death ranks next to tuberculosis and even surpasses the latter disease in many of the larger centers of population. Our interest in this disease is further increased by the important part it plays in the non-combatant casualities in armies. During the Civil War pneumonia was next to typhoid and dysentery as the cause of death. Reports from our cantonments show that pneumonia ranks next to venereal diseases and measles as a cause of sickness. Contrary to the former teaching that pneumonia is a disease of infancy and old age, recent statistics show that over one-half of the cases occur between the ages of 20 and 50 years. Excepting erysipelas, probably there is no infectious disease for which more vaunted forms of treatment and so-called cures have been proposed than for pneumonia. Without exception there is no infectious disease in which treatment has accomplished less. Multiplicity of forms of treatment of any disease is one of the surest proofs that all are unsatisfactory and without avail.

The treatments commonly employed are the results of argument and refutation rather than the results of controlled observation and trial. Judgment as to their efficacy has been based upon theory and speculation rather than on critical scientific analysis of facts and figures. Recently accumulated knowledge of this disease and its various phenomena has been carefully and scientifically studied so that now the physician is able to employ at least a few measures based on critical study.

Lobar pneumonia, as is well known, is "an acute, infectious disease, characterized by a diffuse exudative inflammation of entire portions of one or more lobes of the lung". Etiologically pneumonia is not always due to any one disease germ. Probably in 85 to 90 per cent. of cases the diplococcus pneumonia of Frankel can be found. In the remaining 10 to 15 per cent. of cases the etiological agents may be Friedlander's bacillus, bacillus influenza, streptococcus pyogenes, streptococcus mucosus, staphylococcus aureus and a few others.

In 1910 Neufeld demonstrated that all races of the pneumococcus are identical insofar as their immunologic reactions are concerned, i. e. agglutination and precipitation. Following this suggestion Avery, Chickering, Cole and Dochez working at the Rockerfeller Institute have studied for the past few years the agglutination and precipitin reactions of a large number of different strains of pneumococcus and have tested the power of immune serum to protect mice. As a result of their work the pneumococcus has been divided into four main types, i. e. I, II, III, and IV. Type III consists of the pneumococcus mucosus capsulatus, readily recognized by its morphologic and staining characteristics. Type IV includes a heterogenuous group which does not give the immunologic reactions common to the members of any of the other groups. Fortunately this latter group represents only about 25 per cent. of all strains isolated and is the type most frequently encountered in the mouth secretions of normal individuals. Reference to table I, taken from the reprints of Rockefeller Institute, will show the incidents of these various types and their relation to mortality. From a prognostic standpoint it will be seen that Type III, although the least common, is the most virulent. Type IV is the least virulent. Types I and II together are responsible for 64 per cent. of all cases, and are of relatively high virulence in man, causing approximately 62 per cent. of all deaths from pneumonia. Infections from Types I and II are obtained from contact with patients infected with these types. Types III and IV are found frequently in the mouth of normal individuals. A person may harbor in his mouth and throat organisms of Type IV and be infected from without by Types I, II, or III. A reference to table II suggests that the

*Read before St. Anthony Hospital Clinical Society, Dec. 17, 1917.

presence of the pneumococcus in the blood stream indicates a severe infection and a consequent unfavorable prognosis. Table III shows relation of total leukocyte count to mortality and emphasizes the importance from a prognostic standpoint of daily white blood counts.

The following may be noted from a study of blood changes during the course of this disease: 1. A steady rise in the leukocyte count is usually of favorable import. 2. An initial low count with no tendency toward increase is of grave prognosis. 3. The total number of white blood cells falls rapidly to normal at the time of crisis. If this does not occur it is suggestive of some complication, for example, a continued leukocytosis after crisis with diminished polymorphonuclears and increased leukocytes suggest delayed resolution, or serum sickness in treated cases.

As a result of experiments and study by Cole and his co-workers on the power of immune serum to convey protection, an anti-pneumococcic serum of wonderful efficacy has been produced. Without going into details of the method of producing this serum, a very good idea will be obtained by the reader when I refer him to the well known method employed in the production of diphtheria antitoxin. Anti-pneumococcic serum is produced by immunization of the horse after the same principles employed in the latter method. However, the serum

TABLE I[1]

Incidence of the Various Types of the Pneumococcus and Resulting Mortality.

Type of Pneumococcus	Incidence Per Cent.	Mortality Per Cent.
I	33	25
II	31	32
III	12	45
IV	24	16

TABLE II[1]

Relation of Blood Cultures to Mortality in Pneumonia.

Types	No. of Cases	Blood Cultures				Mortality			
		Positive		Negative		Cases with Positive Culture		Cases with Negative Culture	
		No.	%	No.	%	No.	%	No.	%
I	145	50	34.5	95	65.5	13	26	3	3.1
II	148	49	33.1	99	66.9	36	73.4	9	9
III	55	16	29	39	71	16	100	11	28.2
IV	100	21	21	79	79	11	52.3	3	3.8
Total	488	136	30.3	312	69.7	76	55.8	26	8.3

TABLE III[1]

Relation of Total Leukocytes to Mortality.

Leukocytes	No. of Cases	Mortality %
Under 10,000	29	65.5
10,000 to 20,000	143	23.7
20,000 to 30,000	177	18.0
30,000 to 40,000	76	14.4
40,000 to 50,000	29	24.1
Above 50,000	9	11.0
Total	463	

has been found to be protective and curative only when homologous with the type of organism causing the infection. Furthermore, the serum of Type I is not only the most effective but is the only one recommended by the Rockefeller workers as dependable for therapeutic purposes. Serums for Types II and III are only slightly effective, while obviously it is impossible to prepare a serum for the heterogeneous strains composing Type IV.

Treatment.

Treatment of pneumonia must begin with the diagnosis, and it is important not only that the diagnosis be made as early as possible but that the specific etiologic agent be determined in each case, when the history and physical findings indicate we are dealing with pneumonia. The treatment thereafter may be outlined as follows:

1. Determination of type of pneumococcus. (a) Obtain specimen of sputum. (b) Take blood culture. (c) Obtain specimen of urine. (d) Test patient for sensitization to horse serum.
2. Intravenous administration of serum.
3. Additional measures of treatment.

Obviously to make an etiologic diagnosis requires the facilities of a laboratory equipped to do this work. As a detailed account of the technique of the laboratory methods employed is hardly within the scope of this paper, the reader is referred to "The Monographs of Rockefeller Institute of Medical Research," No. VII. In order that the laboratory manipulations be carried out with success, however, it is very important that a specimen of sputum be obtained early in the disease, and care be taken that this sputum be coughed up from the lung and not simply consist of the saliva which the patient has expectorated. In addition, the blood culture should be taken because of its confirmatory value when positive, in determining the type, and also because of its prognostic value as noted in table II. Furthermore, it has been found that the urine of pneumonia patients frequently contains a substance which gives a precipitin reaction with immune serum, so that when this substance is present the early determination of the type may often be facilitated, or it is at least of confirmatory value. This precipitin substance is also found in pleural and spinal fluid and may be utilized for diagnosis of type in these substances.

Owing to the high susceptibility of the white mouse to pneumococcus infection, this animal is made use of in isolating a pure culture of the organism in the shortest possible time. By reason of the high invasive power of these organisms for the mouse, a pure culture may usually be obtained in from 8 to 16 hours following the injection intraperitoneally of a small quantity of emulsified sputum. The culture of pneumococci thus obtained from the peritoneal exudate is mixed with small quantities of immune serum of the various types and gives an agglutination reaction with its homologous serum. Owing to the great demand for white mice to carry out this technique in the army camps and large cities of the country, breeders have been unable to supply the demand. At the Bierce Memorial Laboratory we have been for some time running tests with the ordinary brown house mouse. Although our series is yet small, so far we have found the wild mouse just as susceptible and as applicable for the test as the white mouse. The brown mouse may be readily obtained in any community at little or no cost by trapping them in the miniature wire cages for sale in any hardware store. They may be handled without danger from biting if the worker simply wears a pair of heavy gloves. I make this preliminary report of our work, in the hope that the use of the wild mouse may serve to tide over the present deficiency in the supply of white mice.

If serum treatment of pneumonia is being contemplated, steps should be taken at once to determine whether or not the patient is sensitive to horse serum. Questioning the patient and his friends as to previous administration of serum

will occasionally elicit this history. Nevertheless, even though this history is negative, it is always advisable to perform the cutaneous test for sensitization to horse serum. This is usually best performed at the time of taking the blood culture, blood count, etc., and consists of injection intra-cutaneously of .002 of 1 c.c. of horse serum, and controlling it with a similar amount of salt solution. If the patient be sensitive, there will appear at the site of injection of horse serum a definite urticarial wheal within an hour. In case of sensitization there is time, while the laboratory is working out the type, to desensitize the patient and so prepare him for the administration of the anti-pneumococcic serum if necessary. The reader is referred to the above-mentioned monograph for the details of this procedure. If the patient has a pneumococcic infection of type I, serum treatment is indicated. This is administered intravenously by means of a salvarsan outfit. The doasge varies with the individual case, but usually is given in large quantities—75 to 100 c.c. This dose is repeated every 8 hours, unless contra-indications arise, until a permanent fall of temperature results. The average dosage per case has been found to be about 250 c.c. Usually from 20 minutes to one hour after the administration of the serum there is noted a rise in temperature, followed immediately by a marked fall. This is known as the thermal reaction. If the temperature continues low from this on, a good result has been obtained. The temperature is taken every two hours and if there is a rise to 102 degrees F. in the succeeding twenty-four hours, the dose is repeated. If there is no temperature drop after eight hours following the treatment, a second dose is to be given.

A small number of cases may be expected to obtain relief following the first injection. The majority, however, require a second, third, or even more administrations. In almost all cases the patient's condition has been found to improve subjectively and objectively. He is better mentally, shows less cyanosis, and there is a decided diminution of the pulse rate. At all events the progress of the disease has been stopped, because: 1. In practically all cases treated with serum, there has been found to be no further extension of the process in the lung. 2. Invasion of the blood streams by the pneumococcus is prevented. In cases where septicemia is already present the blood has become sterile. 3. There is an appearance of immune bodies which ordinarily appear only at time of crisis. This may be due largely to the immune bodies present in the serum injected. 4. There is a disappearance of the precipitin substance from the urine if it has been previously present.

Resolution has not been found to be hastened following administration of serum. However, neither has it been interferred with or delayed. Complications are not prevented by the administration of serum. In fact it is a well known principle that infection is apt to become focal in partly immunized animals. Nevertheless there has been found no increase in complications following serum treatment.

The final test of the efficacy of this treatment depends upon its effect on mortality. Of the 107 cases treated at Rockefeller Hospital, eight died with a resulting mortality of 7.5 per cent. Peter Bent Brigham Hospital, Boston, reports ten cases treated with 9.1 per cent. mortality. When these results are contrasted with the twenty-five to thirty per cent mortality for type I in cases treated by former methods, the value of this procedure is evident.

The following measures of treatment should not be neglected as a supplement to the above procedure:

1. If the case is detected early, it is always best treated in a hospital if such facilities are in easy reach. If the patient is to be treated at home, every effort should be made to provide every means possible for the carrying out of the treatment.

2. When once a patient is found to have pneumonia, he should not be allowed to exert himself in any manner whatsoever. He should not be allowed to

sit up in bed, even for physical examinations. Only such physical examinations should be made as are necessary to follow the course of the disease.

3. Open air treatment is undoubtedly a great aid in the treatment of most patients, particularly as it adds to their comfort, relieving the short, rapid, labored respirations, and quieting the restlessness and distress. However, some patients will be found on whom the open air seems to exert the exact opposite effect. Obviously these are best treated indoors.

4. The diet is not of great importance in this disease, owing to its short duration. It should consist of simple, easily digested nourishing food which is pleasing to the patient. The patient should ingest plenty of water, as much as 3000 c.c. or more per day

5. Little good is derived by active purgation of these patients, in fact harm may be done by the consequent disturbance. A better procedure is to insure a daily bowel movement by use of a mild laxative or enema.

6. Few, if any, drugs are ever indicated in this disease. Cole recommends the early administration of digitalis in dosage sufficient to obtain the cumulative action of the drugs so that in case the heart needs support at the time of crisis the physiological effect is quickly attained. This object is accomplished most easily by the administration of one gram of digipuratum by mouth over a period of two days. At the end of this time, if the patient's condition does not indicate its further use, the drug is discontinued. Digipuratum is used because of its accurate standardization and ease of administration, and is given by mouth in preference to the intravenous method because of the no small danger attendant with the latter procedure.

7. A persistent and tenacious cough accompanied by pain in the chest is probably best treated by small doses of morphine subcutaneously. No local measures can be relied upon in all cases. Poultices and applications of cold frequently give relief. Creosote inhalations often prove of value in relieving the cough. Alcohol may be given to alcoholics.

8. Abdominal distention is frequently quite a disturbing accompaniment, but may usually be relieved by use of hot turpentine stupes, enema, or pituitrin hypodermically.

It is not possible at this time to discuss the various complications that may arise, but obviously it is one of the chief duties of the physician to keep a sharp lookout for them and to meet them when danger signals appear.

Prophylactic immunization has proven successful in animals and is theoretically possible in man. However, there is a considerable variation in the amount of natural susceptibility and immunity in different individuals. Cole has suggested that this might be detected by a method similar to the Schick test. We will all watch with interest work that is being done along this line in the armies at the present time.

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TUBERCLE BACILLI IN THE BLOOD OF TUBERCULOUS ANIMALS AND MAN.*

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A study of the literature on the subject of the presence of tubercle bacilli in the blood of tuberculous patients reveals much conflict in opinion and experimental evidence.

That turbercle bacilli enter the blood vessels and are generalized by means of the circulatory blood is of course unquestioned, but to what extent this generalization takes place is still unsettled. The question has been raised, is the bacillemia in tuberculosis enough or so marked that it can be demonstrated and utilized as a means of diagnosis? In acute miliary tuberculosis the bacilli are particularly likely to be found in the circulatory blood, according to Wilson[1]. In this case the demonstration of their presence would be of practical importance in the early diagnosis of doubtful cases.

Wilson shows that tubercle bacilli can be demonstrated in stained sections of blood and clots obtained at autoposy from the heart and great vessels of a case of acute miliary tuberculosis but that the number of bacilli in the circulatory blood at any given moment is too small to be of any practical diagnostic value.

The case which Dr. Wilson reports, has a history as follows: A housewife, aged 52 years, with negative family history as regards tuberculosis, became ill about October 21, 1914, with a feeling of unusual fatigue, fever and slight chilly sensations, increasing toxemia, rapidly progressing anemia, weakness and dyspnea without any signs of localized disease. Death occurred one month later, November 29, 1914.

Autoposy showed primary miliary tuberculosis in the bronchial nodes, lungs, liver, spleen, bone marrow, kidney amd myocardium. The case certainly appears very favorable for the presence of tubercle bacilli in the blood. The large white clots and blood found in the right side of the heart were imbedded, cut and stained for tubercle bacilli. In all, about one-tenth of the entire large clot was searched carefully for the bacilli and only four typical slender acid fast bacilli were found. Sections of the tubercular lesions of the organs stained in the same manner showed the presence of enormous numbers of bacilli. The above illustrates in a measure the difficulty of detecting the organisms in the blood.

Dieterle[2] claims that the tubercle bacilli entering the blood stream quickly disappear from the circulatory blood. He maintains that it is possible that in an ordinary case all the tubercle bacilli entering the pulmonary veins from a primary bronchial gland focus, and passing into the arterial blood, might disappear from the venous blood by the time it reached the right heart.

Dieterle took 60 c.c. of blood clot from the right auricle and ventricle of a case of primary tuberculosis of the cervical lymph nodes, cut it into 60 sections and spent 60 hours searching for bacilli. He found 4 typical tubercle bacilli and 15 suspicious fragments which he disregarded. He thinks that the blood drawn from the living patient will probably give results more frequently in cases in which the primary focus is in the lungs or bronchial nodes.

Brandies[3] reports on the examination of blood from 400 cases of surgical tuberculosis with positive results in 45 per cent of these cases using 5 c. c. of blood treated by the Schnitter-Uhlenhart antiformin method. This strengthens the belief that the attempt may not be as difficult as it seems.

J. L. Berry[4] of the Department of Health, New York City, has a very interesting report in which she stated that the first investigation in this field seems to have been by Villemin, who in 1868 obtained inoculative results with the blood in miliary tuberculosis. Weichselbaum in 1884 found tubercle bacilli microscopically in otherwise sterile blood from miliary tuberculosis. Next followed Ludke[5]

*Read before the Cleveland County Medical Society, Norman, Oklahoma.

who demonstrated the presence of tubercle bacilli in the blood in a varying percentage of cases. Bergeron in 1904 stated that tubercle bacilli are found in the blood in miliary tuberculosis in relatively rare cases and that in non-miliary tuberculosis, even of a rapid type, bacillemia does not exist.

In 1909 the Staubli-Schnitter method of identifying the bacilli in the blood was introduced. The method is briefly as follows: 10-15 c.c. of blood from a vein are added to a like amount of 2-3 per cent. citric acid or a double the amount of acetic acid, then carefully shaken and allowed to stand for one-half hour. The fluid is centrifuged and pipetted off and 1 c.c. of water is added to the sediment Then 2 to 5 times the amount of 15 per cent. antiformin is added and the mixture is shaken. As soon as solution is complete, which happens very quickly, the mixture is again centrifuged, the fluid pipetted off and the slight deposit is washed and examined by the Ziehl-Nielson stain.

Schnitter[6] found acid fast bacilli in 31.6 per cent. of 38 cases of tuberculosis and concludes that tubercle bacilli are probably regularly present in the blood in organic tuberculosis.

Just previous to this Rosenberger[7] published a report of 100 per cent positive microscopic results in 49 cases of tuberculosis of all stages, 5 miliary. On the contrary, Schroeder and Cotton,[8] Burvill-Holmes,[9] and other American workers attempted to repeat Rosenberger's work, using the same method, but utterly failed to reach the same conclusions. A like result was reached by the English investigators, Hewatt and Sutherland,[10] working with cattle. In contradiction, Forsythe[11] with the same method reported 100 per cent positive results in ten open cases of tuberculosis and negative results in two closed cases.

Anderson[12] in repeating Rosenberger's work used inoculation and culture tests on guinea pigs. He found all direct microscopic examinations of blood were negative and that of 83 guinea pigs inoculated intraperitoneally with human blood, none developed tuberculosis. However, the blood of thirteen tuberculous guinea pigs gave no positive results when injected into other guinea pigs and with 8 infected rabbits the blood of 7 produced tuberculosis in guinea pigs. In three cases rabbit blood specimens gave cultures of tuberculosis, this being the first time, according to Anderson, that successful cultures have been reported from rabbit blood.

Lippmann[13] using the Staubli-Schnitter method found 44 per cent. of 25 cases of pulmonary tuberculosis positive in all stages.

Berry (vide supra) gives a very exhaustive resume of the work of many investigators whose findings vary from 0 per cent in 15 cases to 100 per cent. in 155 cases, with an average from 16 workers with 1372 cases of 52 per cent. showing the presence of tubercle bacilli in the blood. With extremely careful technic and favorable conditions, Berry examined 51 specimens of blood from 51 tuberculous patients. Of these, 13 were from patients in the second stage and 38 from patents in the third stage of the disease, 4 of the latter being bed patients. A most careful search was made, from 150 to 300 microscopic fields being examined with each specimen, and in all cases the results were negative. From the above results Dr. Berry concludes that tubercle bacilli are at least very rare in the blood, if present at all.

Kessel[14] employed five methods in search for the bacilli in the blood. He used the blood direct from tuberculous patients treated and stained as mentioned in the Staubli-Schnitter method, and secondly he inoculated guinea pigs intraperitoneally with the blood of tubercular patients. The pigs were previously tested with tuberculin to see if they were free from the disease.

Third, the blood from the turberculous patients who had previously received an injection of tuberculin was inoculated intraperitoneally into guinea pigs.

Fourth, the blood from tuberculous patients who had previously received a tuberculin injection, and after removal of the serum intraperitoneal injections were made into guinea pigs.

Fifth, the blood after removal of the serum, was planted upon culture tubes of gentian-violet media.

His results by these methods were as follows:

First method: The blood from 10 patients was examined microscopically with negative results.

Second method: In blood from 38 patients inoculated into guinea pigs and at autopsy two to three months later there was no evidence of tuberculosis.

Third method: Seven patients were used. Autoposies of the guinea pigs showed negative findings.

Fourth method: Three patients were used. One of the guinea pigs developed an extensive tuberculosis.

Fifth method: Was unsuccessful.

Kessel concludes that a bacillemia such as is present in other infectious diseases, is at least uncommon in pulmonary tuberculosis even in the advanced stages of the disease.

Watkins[15] maintains that tubercle bacilli can be detected in the fresh blood of a patient suffering with tuberculosis by means of a migraf, a specially devised attachment for a miscroscope.

Hess[16] performed some very interesting experiments upon rabbits and guinea pigs with rather interesting results. Four rabbits were injected for each test, two with the human type of bacillus and two with the bovine type. Later 16 guinea pigs were injected with blood from these rabbits and after six weeks were examined for tuberculosis.

In all twenty-four rabbits and one hundred twelve guinea pigs were used this way. The results were as follows: Of the pigs injected with bovine blood, sixty-nine per cent were found tuberculous. Of those injected with human blood, 18.5 per cent. developed tuberculosis. Hess concludes that there is a certain parallelism between the virulence of the tubercle bacillus and its persistence in the circulation of the rabbit.

In another series of tests, Hess[17] found that a feebly virulent type of bacillus was present in only nine per cent. of the tests whereas the virulent bovine bacillus persisted in the blood stream in 59 per cent. of the cases. He concludes from these tests that virulence plays an important role in bacteriemia.

McFarland[18] after demonstrating that acid fast bacilli are found in many samples of distilled water, concludes that the reports of many of the cases of acid fast bacilli are due to faulty methods and technic.

Conclusion.

(1) Tubercle bacilli are in the blood of patients suffering with acute miliary tuberculosis more frequently than in the more chronic types of tuberculosis.

(2) The bacilli are not present in great numbers and are undoubtedly more numerous at times in the blood stream.

(3) Owing to the fact that distilled and tap water have been found to contain acid fast organisms and that the stroma of red blood corpuscles, lecithin and cholesterin are acid fast and may be mistaken for tubercle bacilli, the possibility of error is considerable, therefore it is very difficult to make a positive diagnosis of tubercle bacilli in the blood.

(4) Many cases of so-called tubercle bacilli in the blood are due to the above facts coupled with faulty technic.

(5) Inoculation experiments show that guinea pigs and rabbits are more susceptible to tuberculosis when injected with bovine blood than when injected with human blood from tuberculous patients.

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THYROID IN UTERINE HEMORRHAGE.*

By O. C. KLASS, M. D., Muskogee, Oklahoma.

Because of the great numbers of women suffering with and from irregular, profuse, and persistent uterine bleedings or hemorrhages, without assignable cause, unexplainable, which are finally thrown into surgery, because of no better known means of alleviation, which in itself makes the result worse than the primary disease, especially in the very young patients, and due to the fact that my attention has been called to a series of the herein mentioned cases, of such character, where the most surprising, encouraging, satisfactory results were obtained through administration of thyroid extract, I was prompted to present this article.

There have been a great variety of pathological conditions due to faulty secretions of the thyroid gland, and while this subject may not be new to most well informed students of medicine, yet its use in the treatment of uterine hemorrhage, and allied conditions, is practically new. American and foreign literature is scarce and lacking in reports of use and experience of thyroid extract, in such cases, so that what is presented in this paper is new, limited and largely assumed, to a degree, until time and further experimentation fix its use and results more certainly and definitely.

E. Sehrt (*Munch Med. Woch*, May 6, 1913, LX No. 18, pp. 961-1016; Feb 10, 1914, LXI No. 6, pp. 289-344), (*A. M. A Jour.*, June 14, 1913 (104), p. 1930, March 21, 1914 (90), p. 974), reviews the recent researches, which demonstrates anew the close relationship existing between the thyroid and genital organs. Excessive or insufficient function of the thyroid caused a change in the blood so that a relative reduction in the neutrophil-leukocytes and a relative or absolute leukocytosis occurred, yet with excessive thyroid functioning coagulability of the blood is greatly reduced, also with insufficiency of thyroid coagulation is hastened.

This effect of abnormal conditions in the thyroid, on the coagulating power of the blood, throws light on certain cases of hemorrhagic uterine disturbances, suggesting, that they might be abortive forms of myxodema. In 20 pure cases of hemorrhagic uterine disturbances, 13 patients showed pronounced signs and evidences of thyroid-hypo-functioning and the coagulating time in all but one was between eight and four minutes, in contrast to nine to ten minutes in the normal blood.

He (Sehrt) also remarks that the thyroid may be involved in the tendency to

*Read before Muskogee County Medical Society.

habitual abortion. He states further that cases have been reported where women married for many years never conceived, but bore children after being placed upon thyroid extract treatment.

This shows, therefore, that syphilis is not responsible for all cases of habitual abortion. (I trust you will pardon this digression from main topic). Sehrt further states that since there is an intimate connection between the function of the thyroid gland and the ovaries, the former may be responsible for various ovarian conditions giving rise to uterine hemorrhages. In 55 cases of uterine hemorrhage, without apparent local cause, thirty-eight showed signs of deficient thyroid action, and under thyroid administration not only was the hemorrhage arrested but the general health improved.

Osborne (*N. Y. Med. Jour.*, Dec. 1, 1906) states he has seen uterine hemorrhage in fleshy women with slow pulse cease under thyroid treatment, yet on the other hand underweight women with amenorrhea to be relieved and profuse menstruation induced in healthy women.

S. Salzman of Toledo (*Am. Jour. of Obstetrics*, Diseases of Women and Children, Vol. LXXIV, No. 5, Nov. 1916) has been doing a great deal of personal work, in attempting to show the relation existing between thyroid and pelvic organs, having used thyroid extract in uterine hemorrhage of unassignable cause, with very gratifying and encouraging results, being seemingly one of the pioneers in this research work.

Dudley (*Principles of Gynecology*, 1904) classifies unknown uterine hemorrhages into the hemorrhage of puberty and menopause, and it is at these periods of life that thyroid disturbances are most likely to occur.

Falta (*Diseases of Ductless Glands*, page 118) states chronic benign hypothyrodism is accompanied by disturbances of sleep, lassitude, especially in the morning, and menstrual disturbances, especially menorrhagia and amenorrhea.

Most cases of uterine hemorrhage can be assigned to such pathological conditions as incomplete abortion with retained secundines, infected endometrium, fibroids, polyps, uterine cancer, ovarian tumors or cysts, diseased tubes, etc., yet there are numerous other cases, where the real, definite cause is not ascertainable, where any and all measures have utterly failed in the treatment.

Since menstrual blood is non-coaguable and also the blood coming from the uterus in these cases, we are led to the final conclusion that there is and must be some substance or secretion that can and does control the same. Sturmdorf (*A. M. A. Jour.*, Feb. 14, 1914) states in his article on "Functional Menorrhagia", that a protest should be made against the too frequent, routine, unneccessary, use and abuse of the curette, also removal of the pelvic organs in these cases. He further states: "It must suffice here to state that the endometrium during menstruation and in the hemorrhagic cases receives normal coaguable blood from the general circulation and sheds this blood in a non-coaguable state. This loss of coaguability is not due to the absence or deterioration of any element essential to the coagulation but to the presence of an inhibiting substance that is periodically secreted by the corporeal endometrium from which it may be expressed. Such expressed endometrial juice is capable of inhibiting in any normal blood. * * The endometrium is active to the secretion of this inhibiting substance by a hormone generated in the graafian follicle. To the present time we have not succeeded in isolating this substance, nor have we discovered its specific antagonist. We have, however, learned to circumvent it by effectual measures." These measures he refers to are vasodilators, local application of acetone, liquor formaldehyde, D'arsonal spark, the treatment to extend over periods of several months. This local treatment extending over prolonged periods cannot be expected to produce an anti-inhibiting substance which is a hormone produced in another part of the body.

There have and do occur, innumerable cases of intractable bleeding, in young

women just entering upon the catamenial life, young women past puberty, primipara, multipara, etc., without assignable cause, where all forms and sorts of treatment, ordinarily used, both internal and local, have proven of absolutely no benefit whatsoever, so that we stand helplessly by, with only one alternative, seemingly—surgery, castration. My attention was drawn to this subject by the articles of Sehrt, Salzman, etc., and in despair begun to look up the treatment and use it with very gratifying and encouraging results.

In the cases of menorrhagia at the advent of puberty, Salzman suspicions and concludes that there is a possible relationship existing between the simple nontoxic forms of goiter and chlorosis, in these cases, since most of these young women are suffering with some form of anemia. If such relationship exists, which he (Salzman) is led to believe does, then the administration of thyroid would be of some possible benefit.

I recall several cases in my own practice, where the administration of thyroid extract, in young girls between the ages of twelve and sixteen, just entering upon the menstrual period of life, where profuse bleedings over long periods had existed, without evidences of the existence of goiter, chlorosis, etc., after all ordinary measures had been resorted to, were promptly relieved and greatly benefited by the administration of this gland extract. I have also been amazed to find two cases of fibroid degeneration of the uterus, one in particular, with the loss of great amounts of blood, and the other with a small amount of the bloody discharge, both stopping in a short time under the administration of thyroid extract, after all other medicinal measures had proven useless and without result.

I recall another case in a lady, married, forty years of age, mother of two children, youngest twelve years, always having been regular and without abnormal symptoms during menstruation, stated that she was called to the north to be at the bedside of her father, where she administered unto him for several weeks until he died, so that about a week thereafter she began to have flooding spells, which lasted several weeks and finally consulted a physician who succeeded in checking them. These spells came on about every three weeks thereafter, and continued for ten days to two weeks, causing her to be very weak and anemic. She would lie down, use cold to abdomen, upon the advice of another practitioner, and took ergot without effect. Packings and in fact all the ordinary means had been used for controlling same, without effect. I was asked to see her, and upon examination, both internal and external, could find no condition to account for same, and also after trying all the usual medication recommended therefor, finally placed her upon thyroid treatment, and to my great satisfaction had all cleared up in three days time, to remain that way. She left the city about a year ago, and up to that time had not been troubled therewith. This case was advised by her other medical attendant that panhysterectomy would be her only salvation, and happy I was to be able to spare her this tremendous shock and sacrifice. I also used by way of trial, having seen it used by Adler (Schauta Klinik, Vienna) calcium lactate in fifteen grain doses every four hours, without effect.

If you will pardon the report of a case I, by accident, was permitted to see that occurred at the other end of the body, hemorrhage following the extraction of a tooth, in which after twenty-four hours attempt to control same, the bleeding persisted, and finally when all known specific, sure-shot measures had been used, the last one, so-called panacea, consisting of iodin and chloroform, also failed, this being a case of so-called floating clot, in posterior molar tooth socket, was asked to see the case in the final treatment and advised the use of thyroid extract. The young man without history of being or coming from a family of bleeders, was getting weak from the constant oozing and after taking three tablets at two hour intervals, the hemorrhage ceased and has remained absent to date. This was an experiment but worked beautifully, yet was interesting, since it had never been used for such cases. I recently saw a young married lady, the mother of two children, age twenty-five, who reports that she only menstruates every four

or five months, and then very little, is nervous, emotional, has hot and cold flashes, headaches, etc. When menstruation does occur it is very scanty and only lasts a day or two. I used every known means to relieve her, could find no evidence of strumous diathesis, etc., finally in despair placed her on thyroid extract, five grains three times daily, to be rewarded by the report that after three weeks treatment, her menstruation occurred, the most natural in color, amount and duration she had had in five years time. Her nervousness has become less, hot and cold flashes disappearing, insomnia giving way to peaceful, refreshing sleep, headache gone, and whole general condition greatly benefited.

These are only a few reports, considering the vast numbers that are seen daily by those of larger clientele, but are sufficient to cause us to direct our attentions to this line of treatment in the attempted solution of the great array of unexplainable menstrual disorders, hoping by more concerted application and experimentation therewith, our results and scope of application may be broadened, and more gratifying.

I conclude, in the identical words of Salzman, to-wit: There is a type of hemorrhage from the uterus not caused by any discernable pelvic disease or pathology, nor related to any of the so-called hemorrhage states, but due to an alteration or lack of one or more of the harmones, which control the normal flow of the blood from the uterus. This alteration is due to a deficiency in the secretion of the thyroid gland and such hemorrhage can therefore be controlled by a judicious exhibition of the dried glandular thyroid substance.

Finally, I would caution against the indiscriminate use of this substance. It must be used only when the diagnosis is assured, for bleeding may occur in cases of hyperthyroidism, where much harm might be done if given in such a case.

HERNIA.

J. C. Bloodgood, Baltimore (*Journal A. M. A.*, Feb. 23, 1918), calls attention to a small group of hernias that can be readily recognized at the first examination, but which are more liable, than others, to recur or fail to be cured by operation. They can be recognized when the patient is examined lying flat on his back. If the finger is pressed against the scrotum and pushed up into the external ring, as the index finger passes through the external ring (the hernia having been reduced) it usually meets an obstruction (the conjoined tendon) and is deflected upward and outward following the course of the so-called internal ring. In this smaller group the index finger meets no obstruction, but enters at once into the peritoneal cavity. Now and then one gets the impression that it does this in other cases, but if the patient is asked to raise his head, the noncontracting rectus muscle pulls tight the relaxed conjoined tendon and the examiner readily recognizes that it is not absent but simply relaxed. In those cases in which the examination detects the complete absence of the conjoined tendon, the ordinary operation for inguinal hernia fails to cure in about 50 per cent. of the cases, according to Bloodgood's observations. After his first observation of this in 1898, Bloodgood devised and published a description of the transplantation of the rectus muscle to take the place of the conjoined tendon, and this he found had been independently worked out by Woelfler in 1898. Later, Halsted modified the transplantation of the rectus muscle by turning down a pedunculated flap of the anterior sheath of the rectus. He calls attention to this class, thinking it may be of service to examining physicians of the large cantonments now in use.

JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME XI MUSKOGEE, OKLA., APRIL, 1918 NUMBER 4

PUBLISHED MONTHLY AT MUSKOGEE, OKLA., UNDER DIRECTION OF THE COUNCIL

DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POST OFFICE AT MUSKOGEE, OKLAHOMA, AS SECOND CLASS MAIL MATTER, JULY 28, 1913

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Advertising of articles, drugs or compounds unapproved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

EDITORIAL

NEW NEEDS OF THE ARMY MEDICAL DEPARTMENT.

Rapidly changing events of the War have caused our Government to issue insistent demand for an increase in the Medical Officers. Based on calculations made under conditions existing when we entered the War last April, an estimate was made that we needed approximately 20,000 men—we now have about 17,000 men. Discharges for various reasons have sent many men home. It is said our reserve supply—men commissioned, but not yet called—is now less than 2,000, certainly a small number.

It is now the plan to call out 800,000 soldiers in 1918, as rapidily as contonments can be emptied to care for them. For these men an additional 8,000 physicians—one physician to a hundred soldiers—will be needed. Of course the physicians will be forthcoming. The Medical Profession of our country will respond, but we must promptly get over the "Let John do it" idea, for this is too prevalent in the minds of many of us. There are today in Oklahoma many physicians who can and must lay aside their personal ideas of accumulating money, while hundreds of thousands of our spirited boys are going forward to the trenches, thousands to their graves on foreign soil.

Unforeseen events have placed on our citizenship the greatest burden our nation ever faced or will ever face again. It is the idlest twaddle to indulge in talk of Germany being starved or that they must conclude the war on account of internal troubles. We must face the cold fact that such internal troubles possibly are much more likely to occur among our own allies.

We who are now only called on to volunteer must not forget that every man in Germany is already a soldier, that probably less than a million and a half of them have, so far, been put out of action, that every woman, child and domestic animal is at the absolute disposal of the German war machine. Everything is subservient to the end that Germany must win the War. They have now probably seven to nine million men trained, while we must hurriedly make our army to meet them while our allies hold their lines as best they can, with anxious eyes

turned to America for aid. Thinking men largely agree that this year will be one of great punishment for the allies and we will do well to hold what we have, with great likelihood that in many places we will have to give ground.

Major Henry D. Jump is now touring the country calling attention to the crying needs of the new situation. Your country now requires that you come forward and offer your services. Every man under 55, whose family and dependents do not need him very greatly, is now expected to offer his services. The late estimates call for approximately a total of 35,000 physicians and Oklahoma must do its part as it practriotically will. The smug, meaningless statement "I am ready when they need me" can no longer go or be tolerated, for unless you are commissioned and have placed your affairs in order, the country has not your services.

Okahloma physicians must realize that nationally we face the greatest peril. If we lose this war we must at once turn a peace loving country into an armed camp, waste our great wealth in maintaining armies of appalling size we never dreamed of before or face the alternative of national disintegration, consequent vassalage to a people who are ready to and do go to War, practically on the order of one autocratic Emperor. The War is no longer a struggle between two mere peoples—it is a War between two systems: Autocracy and Democracy, so diametrically opposed in spirit that they can no longer exist in the world. The issue must be settled now and definitely, if possible, for all time.

We have entered into this discussion somewhat at length in order to assist if possible in awakening the individual physician from what may be characterized as a lethargic state. All of us know fairly well the conditions and dangers. Everyone must now do his part. Personal gain must now be forgotten, if in the future we are to be permitted to continue the pursuit of happiness as we have been allowed so long to do.

The physicians of every city and town in Oklahoma should meet without delay and discuss prompt action. Those who can go, but have heretofore hugged the delusion that they are too valuable to their communities, should have it pointed out to them that unless they do go, they may soon have neither country or community.

Doctor, wait no longer. If this applies to you, act at once. Two physicians must do the work formerly falling to three. Those who are unfortunately aged at this time or who have dependents they must remain with and provide for must prepare to do more work in order to spare the doctor the army now needs.

Application for examination should be forwarded to Lieut. L. M. Sackett, M. R. C., Oklahoma City. It is hoped that examinations may be held in the larger cities of the state, but you should indicate your readiness by writing your application at once.

THE DOCTOR'S OPPORTUNITY.

Breathes there a man with a soul so dead
Who never to himself has said:
This is my own, my native land.

In the formation of an army two main factors are necessary for efficiency. Well located sanitary camps for housing and good roads for travel. The personnel must be made up of first class sound men. It must be, therefore, apparent that the two main divisions of an army are the Engineer and the Medical Corps. Fortunately in a newly formed Army these two branches are, from their education and training, competent to at once begin their work. In other words, they are really the creators of mobilizations. To the doctor falls the better part, the health and the life of the troops. Never before has such an opportunity as the present been offered to the doctors of America. Your country calls—will you or

can you allow this call to go unheeded? Besides your patrotism, which at this time must be burning out your very soul—think of the numberless advantages that this service offers to you individually. It is beyond argument that if you enter the Medical Corps and apply yourself diligently to its duties, when the war has ended and you return to your home you will have acquired such an experience that never again will fall to the lot of medical men: and in addition you will have demonstrated to yourself at least, that which you have so often prated about—man's humanity to man. Of course we know that you are one of, if not the leading man in your community. So much the better, for the men at the front need the best that is to be had. Of course, your community cannot spare you—not now, but wait until next summer when the news reaches the mother that her son perished because there were not enough doctors—do you think she will spare you then? Yes, we agree that there is a difference between living with an income of five thousand or more and two thousand—but, if you go now, there is a good chance of your making the five thousand again. If you do not go, you may be living on less than two thousand in the near future. If you have lived in luxury and slept on downy beds, the army fare will be coarse and cots will be hard. But if you do your full duty when you get there, the food will be sweet and you will not find fault with your bed.

And doctor, when you lay aside your civilian clothing, also cast aside all your ideas of personal greatness along with your small, petty jealousies. Be loyal to your superiors and do not crowd out your inferiors. Remember, you are but an atom in this great unit—slip in noiselessly and easily. Do not forget that

Honor and fame from no condition rise,
Act well your part, there all tne honor lies.

Before you begin to inoculate the men under your care against disease—first inoculate yourself with the serum of service and sacrifice.

C. W. Heitzman.

THE AMERICAN MEDICAL ASSOCIATION IN THE WAR.

Certain criticisms of alleged lack of activity of the officers of the American Medical Association, appearing in the February *Kentucky Medical Journal*, have been called to our attention. Editorially the Kentuckian says in part: "This should have been done long ago by the American Medical Association, through its splendid facilities for organization, but it has so utterly failed to realize its opportunities in this respect that it is barely consulted in Washington, and the duties and responsibilities it should have proudly and efficiently borne have been undertaken by the Medical Section of the Council of National Defense".

Honest, constructive criticism is certainly one of our Nation's present great needs. Such criticism helps the system or person criticised, spurs him to increased effort and efficiency. Constructive criticism has undoubtedly saved the British Empire up to this time from destruction. Criticism, even through the medium of isolated cases of mismanagement and almost unavoidable lack of necessary supplies in our cantonments, undoubtedly placed all officers on the alert and promptly improved conditions.

But in this particular instance, we are constrained to believe that either some measure of pique or malice, some ungenerous impulse or perhaps misconception of the actual work performed by the Association, prompted the editorial.

The Surgeon-General, certainly the best judge, acknowleged officially on February 22 "the great services rendered by the Americal Medican Association, to me personally and to the Office of the Surgeon-General, in organizing the Medical Department of the Army". Continuing, General Gorgas says, "Since April, 1917, the Board of Trustees, the Officers at the Chicago Headquarters, *The Journal* and all the machinery of the American Medical Association have been important and distinctive factors through which many thousands of physicians have been

influenced to apply for commissions in the Medical Reserve Corps; medical officers have received valuable instruction by means of special articles printed in *The Journal*, etc., etc., and in other ways too great to enumerate here".

The Medical Section, Council of National Defense, has done a great work. The body is explicitly charged with certain duties, its members are Army Officers with all the power of the Govermnent behind them, but everyone who knows anything of the situation is aware that the A. M. A. officers have spent a great deal of their time in Washington advising and assisting the Medical Section and have practically subordinated every possible force of the Chicago office to the same end. A glance at the back files of the *A. M. A. Journal* will convince the reader of the immense amount of labor expended for the National good and the tremendous energy expended to inform physicians of every phase of medical military activity. Certainly we would be in a sad state had not this work been carried on by the A. M. A.

We feel utterly out of patience with the critic who at this time unnecessarily criticises. This is no time for the exhibition of anything except the spirit to cooperate, to improve, to place shoulder to shoulder and use all our energy for the betterment of our National service.

A TUBERCULOSIS SURVEY.

The Oklahoma Association for the Prevention of Tuberculosis announces that in April Professors Murray Horowitz of the Massachusetts Institute of Technology and Gayfree Ellison of the Oklahoma University will begin a series of health surveys of Oklahoma's principal cities. Dr. Ellison will begin work June 1st. The State Department of Health and Mr. Jules Schevitz, Secretary of the Oklahoma Association, will cooperate in the work.

The war has forcibly called the attention of the people to the great handicap of tuberculosis to the soldier. Coming at this time, everything affecting our soldiers has an added interest and the Association could not have selected a better time as to the psychology for such an investigation. It is said that in France, more than any other country, tuberculosis is prone to reassert itself when the man goes to the hardships of trench warfare with its consequent overexposure. Every effort is made to detect liability to and incipiency of the disease before the soldier is sent abroad, but despite the efforts an unusually large number are incapacitated and have to be invalided home.

These facts brought to the attention of the people now will have a good effect toward enlisting their intelligent cooperation in the control and prevention of the infection at its fountain head, which is the home. Until those with susceptibility to the disease and those who live in surroundings conducive to its development can be brought to see the great danger to themselves and their neighbors, not much headway toward control is to be expected.

TULSA MEETING, MAY 14-15-16.

Committee on Arrangement for Meeting Places:—Dr. N. W. Mayginnis, Chairman; Dr. R. S. Wagner, Dr. D. W. Wadsworth.

Program Committee:—Dr. C. A. W. Pigford, Chairman; Dr. W. H. Rogers, Dr. F. Y. Cronk.

Badge and Registration Committee:—Dr. G. A. Wall, Chairman; Dr. J. F. Gorrell, Dr. Bertha Margolins.

Finance Committee:—Dr. S. DeZell Hawley, Chairman; Dr. S. G. Kennedy, Dr. M. P. Springer, Dr. C. L. Reeder. Dr. Ross Grosshart.

Publicity Committee:—Dr. F. S. Clinton, Chairman; Dr. F. M. Boso, Dr. C. D. F.O'Hern.

Executive Committee:—Dr. W. Albert Cook, Chairman; Dr. W. W. Beasley, Dr. A. V. Emerson, Dr. A. Ray Wiley, Dr. W. J. Trainor.

Hotel Committee:—Dr. W. Forest Dutton, Chairman; Dr. C. L. Reeder, Dr. F. S. Clinton.

Entertainment Committee:—Dr. S. DeZell Hawley, Chairman; Dr. A. W. Roth, Dr. W. E. Wright.

Reception Committee:—All members not connected with other committees.

THE ARMY MEDICAL DEPARTMENT ENCOURAGING A FALLACY.

The drug supplies that are being purchased by the medical department of the United States Army are commendably free from unscientific and worthless proprietary preparations. This is progress. One's optimism, however, is tempered in looking through a long list of drugs and chemicals on which bids are asked by the General Purchasing Office of the Medical Department, U. S. A. Item No. 148 of "Post Supplies" calls for three tons (in one pound bottles) of the "Compound Syrup of Hypophosphites"! It is safe to say that there is not a physician in one of the army posts who, if the question were put to him frankly, would admit that "Compound Syrup of Hypophosphites" belonged in the armamentarium of a scientific physician. Yet, six thousand bottles of this relic of a past generation are called for, are to be paid for and are to occupy valuable freight space in shipping to the various army posts. What utter waste! And what a reflection!!—*Journal A. M. A.*, March 16, 1918.

PERSONAL AND GENERAL NEWS

Dr. Ralph Mavity, it is said, will locate in Billings.

Dr. W. B. Hudson, Yale, visited New Orleans clinics in March.

Dr. J. L. Adams, Pryor, is doing postgraduate work in Chicago.

Dr. A. R. Holmes, Henryetta, is doing special work in New Orleans.

Dr. and Mrs. W. E. Dicken, Oklahoma City, visited Colorado in March.

Dr. H. M. Reeder, Shawnee, lost his Ford, a 1918 model, by theft in March.

Dr. G. C. Bruce has located in Stillwell. His former home was De Lark, Ark.

Dr. and Mrs. E. S. Ferguson, Oklahoma City, visited New Orleans in March.

Dr. Phil Herod, M. R. C., El Reno, has been ordered to Ft. Riley for instruction.

Dr. Julian Field, Enid, is a "Ford" victim. The crank broke his arm March 6th.

Dr. N. P. Lee, Checotah, was rather seriously ill in a Muskogee hospital in March.

Dr. D. D. Howell, Nowata, visited San Antonio in March. He returned greatly benefitted.

Drs. E. Brent Mitchell and G. Pinnell, Lawton, announce the dissolution of their partnership.

Dr. Blair Points, Miami, has been appointed city health officer, succeeding Dr. T. W. Brewer, resigned.

Dr. T. J. Nunnery, M. R. C., Grandfield, has been ordered to report at Ft. Sam Houston for active duty.

Dr. F. W. Rogers, Carnegie, is able to be out after an extended illness and operation at the El Reno Sanitarium.

Dr. J. S. McFaddin, Hollis, visited Chicago clinics in February where he did special work in major surgery and head work.

Dr. A. H. Bungardt, Cordell, announces that he will devote his time solely to surgery hereafter. He will have charge of the Cordell Hospital.

Dr. J. R. Collins, Nowata, has accepted the position on the Local Board for his county created by the resignation of Dr. J. P. Sudderth.

Dr. J. B. Haggard, South Coffeyville, who was discharged from the Army on account of a fracture of the arm, it is said will locate in Miami.

The State Health Department estimates that more than 75,000 people were vaccinated over the state against smallpox in January and February.

Dr. J. B. Chastain, Broken Bow, has moved to Davis.

Dr. J. W. Nieweg, M. R. C., Duncan, has been ordered to Ft. Riley.

Dr. W. E. Simon, M. R. C., Alva, has been ordered to Ft. Riley for duty.

Dr. O. E. Templin, M. R. C., Alva, has been ordered to report April 1st for duty.

Dr. C. E. Northcutt, M. R. C., Lexington, was ordered to report for duty March 24.

Dr. E. S. Sullivan, M. R. C., Oklahoma City, has been ordered to report for duty at Ft. Riley.

Dr. J. S. McFaddin, Hollis, has returned from Chicago where he has been studying eye, ear, nose, and throat.

Drs. M. M. DeArman, Mangum; and General Pinnell, Lawton, have moved to Miami and formed a partnership.

Dr. Geo. W. Tilley of Pryor, who has been stationed at Camp Beauregard, has been ordered to Camp Greenleaf, Ft. Oglethorpe.

Dr. Commodore Farrington, Shawnee, died in that city February 22 from pneumonia. Dr. Farrington had practiced medicine in Shawnee for seventeen years.

Dr. R. I. Bond, McAlester, has announced his candidacy for the state senate. Dr. Bond was formerly a member of the house and made a good record at that time.

Dr. L. J. Moorman announces that the capacity of the Oklahoma Cottage Sanitarium for the Treatment of Tuberculosis will be increased by a tewlve bed addition.

Drs. J. Clay Williams, formerly of Stroud, and J. T. Wharton of Douthitt have formed a partnership and located at Picher. They have offices at the Picher Hospital.

Dr. Ralph V. Smith, Tulsa, Captain M. R. C., met many of his old Oklahoma friends when he was ordered to Oklahoma City to take special work in Orthopedic Surgery.

Dr. R. M. Howard, M. R. C., Oklahoma City, who has been stationed at Camp McArthur, has been ordered to the Rockefeller Institute, New York, for special instruction.

Dr. E. S. Lain, Oklahoma City, is joining the plutocratic class. He announces that his Medical Mining Company is striking it rich and that shortly the stockholders will be in clover.

Dr. Claude Thompson, Muskogee, tried to prevent a glass door from slamming recently. The door stopped after his arm went through; a friendly surgeon finished up the work with twenty-one stitches.

Dr. H. M. Stricklen, Tonkawa, recently took the position that a hurried physician did not have to literally obey the law. The court agreed with the doctor and ordered him released from the charge of violating the speed laws.

Dr. J. F. Means, Claremore, has been in Washington some time representing the Claremore Commercial Club. It is hoped that the War Department may establish at Claremore a Sanitarium for convalescent troops from the nearby cantonments.

Medical Army Officers will be detailed by the War Department to attend the annual meeting at Tulsa May 14-16, if the plans materialize. The object of their visit will be to have first hand information as to the actual conditions and further needs of the service.

D. J. J. Gable, Norman, has been ordered to active duty in the Medical Reserve Corps. The War Department extended the time for active service in his case until July 1st, but Dr. Gable waived the extension and reported for service. His departure cripples the State Hospital at Norman, leaving only two physicians to look after the large number of patients.

Dr. and Mrs. W. Albert Cook, Tulsa, entertained Major and Mrs. Henry D. Jump of Washington during Major Jump's recent visit and inspection through Oklahoma, accompanying them to Oklahoma City and Camp Doniphan. Dr. Cook became so enamoured with the military service that he took the examination at Oklahoma City and will enter the Medical Reserve Corps.

Beckham County Medical Society is meeting the H. C. L. with a general raise in prices for services rendered. We heartily agree to that proposition. The Medical Profession as a rule is receiving just about the same amount of fees for service as was in vogue ten years ago. Everything else has been elevated in price to the doctor, while he is sending out bills to the same old tune of long ago.

The Oklahoma City Times editorially suggests that doctors should volunteer at this time. The Times pays a high compliment to those who have already gone, pointing out the sacrifice involved but suggests, and rightly so, that the sacrifices at this time are not confined to any class and that all must take up the burden and enter the service of the country in the position they are best fitted to fill.

Central Oklahoma Medical Society met in Enid February 27th. The following officers were elected for the ensuing year: President, Dr. W. L. Kendall, Enid; first vice-president, Dr. W. J. Wallace, Oklahoma City; second vice-president, H. A. Lile, Aline; secretary-treasurer, C. J. Fishman, Oklahoma City. Clinics were held in the Enid hospitals in the forenoon, followed by lunch at the Oxford and the scientific meeting in the afternoon.

"Dr." Willard Carver, "Big Chief," "Fountain Head," etc., etc., of the Chiropractic fraternity, is again in the limelight by reason of divorce proceedings. The editor had the nauseating privilege of reading some of the depositions in the case, which were of such a nature that the newspapers of Oklahoma City dared not even hint at the contents. They bear out generally the writer's vaguely formed opinion of some time past that Carver was either a bad actor or had something radically wrong with his Fountain "Head."

Dr. Chas. W. Heitzman, Captain, M. R. C., Muskogee, has been ordered to active duty at Ft. Riley.

The Medical Section, State Council of Defense, met in Oklahoma City March 23, Dr. L. Haynes Buxton, Chairman, presiding. The meeting was well attended and plans formulated to make the work as effective as possible. Dr. Buxton, who we all know as a forcible speaker, stated the situation well and patriotically at the committee meeting and the evening meeting as well. Addresses were also made by Drs. Le Roy Long, A. K. West and John W. Duke. The principal address of the evening was made by Dr. Henry D. Jump, Major, M. R. C., who is in service with the National Medical Section at Washington.

Major Henry D. Jump, Philadelphia, member of the Medical Section, Council of National Defense, visited Oklahoma late in March, speaking to physicians and the public at Tulsa and Oklahoma City for the purpose of calling attention to the coming needs of the Medical Department. The visit was productive of much good, as explaining many points of interest to the profession in connection with the medical service and incidentally stimulated many physicians to apply for commissions in the Medical Reserve Corps. Major Jump created a most favorable impression wherever he went. The general verdict of the doctors was that he "is a regular fellow", and they regretted that his time with us was so limited. He will make a flying visit to many parts of the west, including Pacific coast points, before his return to Washington to resume his duties.

CORRESPONDENCE

London, Eng., Feb. 12, 1918.

Dr. Claude Thompson,
Muskogee, Okla.

Dear Dr. Thompson: I have never had the pleasure of meeting you although I have often heard my partner speak of you in glowing terms. For your information, will say that I became a citizen of your State in the fall of 1915, when I formed a partnership with Dr. Fowler Border of Mangum, and where I enjoyed a lucrative surgical practice, being half interested in the surgical practice of the Border Hospital at that place. I came to Oklahoma from New York where I had spent three years in the P. G. study and practice of surgery, being resident surgeon of Bayonne Hospital in 1915. And since going to Oklahoma I have not had the privilege of attending State Association, because my partner claimed the right by seniority, and as it was impossible for us both to be away from hospital at same time, I have been unfortunate in not making yours and many others of our colleagues acquaintance. However, I think you will be able to place me from the above data. I have been in London four months (left Mangum Sept. 9, 1917), on staff of Bermoudsey Military Hospital, where I have gotten some splendid work and am really beginning to feel like an "old army surgeon." But my greatest sorrow has been my inability to receive the Journal. So will you kindly send it to me monthly, address in care American Express Co., No. 6 Haymarket St., London, as they will always have my forwarding address.

In conjunction with my regular work I have been doing some special work at the Royal Army Medical College, principally in amputation and artificial limb fitting. Will be glad when the war is over and I can get back to dear old Oklahoma and my hospital.

Hoping you had a jolly Xmas and Happy New Year, I am,

Fraternally yours,

1st Lt. M. O. R. C., attached to R. A. M. C. Frank H. McGregor.

MISCELLANEOUS

A NEW REVIEW ON WAR SURGERY.

There has just been prepared in the Office of the Surgeon General a new pamphlet Review of War Surgery and Medicine (March, 1918, vol. i, No. 1). According to the editorial note this review is to appear monthly and to be devoted to abstracts of war medicinal literature. This little pamphlet will furnish the medical personnel of the Army abstracts of original papers of importance, necessary information in a short compass, and prompt publication of reports which otherwise might not gain circulation.

In this first volume there is a splendid review of Surgery in the Zone of Advance prepared from data written by Major George de Tarnowsky, based upon his personal observations in the French army front. It is the best description that has yet appeared in American literature of the war.

This is followed by a most readable and instructive review of the most recent data on gas gangrene, trench foot and the general principles guiding the treatment of wounds of war.

Copies of this review may be obtained by addressing the Superintendent of Documents, Government Printing Office, Washington, D. C., enclosing ten cents in stamps.

This review should be in the hands of every officer of the Medical Corps and should be of interest to the entire medical profession not in the service. The reviews are very well written and make most interesting and profitable reading.

THE STATE LABORATORY MOVING.

Dear Doctor:

Our State Laboratory is today moving from Guthrie to Oklahoma City. Following the receipt of this letter please do not send any more specimens to Guthrie.

Address all specimens, correspondence and telegrams in connection therewith to: Director, State Board of Health Laboratories, Second and Stiles Sts., Oklahoma City, Oklahoma.

Hoping that you will make free use of our increased facilities,

Sincerely yours,
JOHN W. DUKE,
State Commissioner of Health.

AMERICAN MEDICAL ASSOCIATION NEWS.

THE CHICAGO SESSION.

Committee on Arrangements.

The Local Committee on Arrangements for the Annual Session of 1918 to be held in Chicago, June 10-14, is actively engaged in perfecting plans for the comfort and entertainment of the Fellows of the Association and their guests.

All correspondence with the Local Committee on Arrangements or with any of its subcommittees should be addressed to 25 East Washington Street, Chicago.

Clinics.

The chairman of the subcommittee on clinics, Dr. Charles F. Humiston, announces that there will be a series of clinics for the Fellows of the Association on Thursday, Friday and Saturday, June 6, 7, and 8, and on Monday and Tuesday, June 10 and 11. Further announcements regarding the clinics will appear in these columns from time to time.

Alumni and Section Dinners.

Alumni and section dinners will be held on Wednesday evening from 6 to 8 o'clock so as not to conflict with other events which are being planned. The chairman of the subcommittee on alumni and section entertainment, Dr. J. H. Stowell, announces that his committee is cooperating with officers of alumni associations in arranging for reunions. The committee desires, also, to assist the officers of those sections which desire to arrange for section dinners.

HOTEL HEADQUARTERS FOR THE CHICAGO SESSION.

The following hotels have been tentatively designated as general and section headquarters for the Chicago Session, June 10 to 14:

General Headquarters: Hotel Sherman, North Clark and West Randolph.
Practice of Medicine: Hotel Morrison, 83 West Madison.
Surgery, General and Abdominal: Auditorium Hotel, 430 South Michigan.
Obstetrics, Gynecology and Abdominal Surgery: Congress Hotel, South Michigan and Congress.
Ophthalmology: Hotel LaSalle, LaSalle and West Madison.
Laryngology, Otology and Rhinology: Hotel LaSalle, LaSalle and West Madison.
Diseases of Children: Congress Hotel, South Michigan and Congress.
Pharmacology and Therapeutics: Auditorium Hotel, 430 South Michigan.
Pathology and Physiology: Auditorium Hotel, 430 South Michigan.
Stomatology: Congress Hotel, South Michigan and Congress.
Nervous and Mental Diseases: Blackstone Hotel, South Michigan and East Seventh.
Dermatology: Blackstone Hotel, South Michigan and East Seventh.
Preventive Medicine and Public Health: Auditorium Hotel, 430 South Michigan.
Genito-Urinary Diseases: Auditorium Hotel, 430 South Michigan.
Orthopedic Surgery: Congress Hotel, South Michigan and Congress.
Gastro-Enterology and Proctology: Auditorium Hotel, 430 South Michigan.
Scientific Exhibit, Registration Bureau, Commercial Exhibit, Information Bureau, and Branch Postoffice: Hotel Sherman, North Clark and West Randolph.

Reprinted from *The Journal* of the American Medical Association March 9, 1918, Vol. 70, p. 715.

RELIABLE THYROID PREPARATIONS.

In the *British Medical Journal*, October 20th, 1917, Dr. Carver, M. R. C. P., London, emphasizes the necessity of specifying a reliable brand of Thyroids and Thyroid Tablets. He called attention to the way in which some manufacturers label their preparations. If the doctor will demand Armour's he will know that his patient gets a specific quantity of Thyroid tissues because we standardize our Dessicated Thyroids and Thyroid Tablets. Each Thyroid Tablet (Armour's) contains a certain quantity of standardized Thyroids and that amount of Thyroids represents five times as much fresh thyroid gland. Whenever a preparation of any of the endocrine glands is required, the physician should specify Armour's and see that his patient gets Armour's. The doctor prescribes a preparation for a certain purpose and he can expect results only from first class products.

DETECTION OF PRETENDED LOSS OF HEARING.

Detection of pretended loss of hearing with special reference to unilateral deafness, which is said by French military physicians to be a common form of malingering and one most difficult to detect, is the subject of a paper by R. R. Brownfield, Phoenix, Arizona, (*Journal A. M. A.*, March 2, 1918). He describes a method of testing cases by which he claims certain advantages over the acoumeter used by the French physicians. In his device batteries and make-and-break contact are dispensed with, and the ordinary 110 volt alternating commercial lighting current is used. The variable current is produced by a potentiometer. No vibrating iron is used, and the maximum strength of current employed depends on no factor except the ratio of the electrical resistances used. The sound producer is similar to a telephone receiver, except that the core is of soft iron and is not magnetized. This eliminates the variability due to demagnetization, and doubles the pitch. The sound producer is provided with three lugs to hold it away from the ear, so that the sound will be transmitted solely by air conduction. By simply turning the indicator from 100 to zero, one can cause the sound to increase from the point at which it is just perceptible to one of normal hearing, the threshold of audition, or 100 per cent. acuity, to a degree of intensity at which failure to perceive it indicates that the subject has no practical hearing. In addition to the variable reciever, there is a supplementary one that always operates at maximum intensity, irrespective of the loudness of the other. In the usual test for acuity of hearing, only the variable receiver is used. As the subject holds this to the ear, the pointer is gradually carried from the zero to the 100 degree point and he is directed to tell at what point the sound ceases to be heard. This is noted and the movement of the pointer continued still farther, and he is asked to note the point at which it begins again to be heard. After some repetitions, the points will be found to harmonize quite closely, except in the case of malingering. The apparatus is of course out of the patient's sight—behind him. In case of a person claiming deafness in only one ear, he is made to hold the constantly loud receiver over the alleged deaf ear and the variable receiver over the other. Starting at 100 the pointer is gradually moved toward zero and he is asked to say when he first hears the sound in his good ear. If he has complete deafness in one ear the presence of the loud receiver will not disturb him, but if he is merely pretending, it would be absolutely impossible for him to identify any sound whatever in his good ear, to which the variable receiver is applied, until a point on the scale is reached that would normally indicate very defective or almost no hearing for the good ear. The test can be repeated with the loud receiver disconnected, and a totally different reading secured in the case of malingering.

THE GOOD SAMARITAN FUNCTION OF THE MEDICAL CORPS.

Major George de Tarnowsky, M. O. R. C. (Review of Surgery and Medicine, March 1918, vol. i, No. 1, prepared in the Office of the Surgeon General), gives one of the best descriptions of the surgery in the zone of advance, from personal observations on the French front. Attention of all medical officers is directed to the following:

"In addition to hot meals which are carried to the soldiers in the trenches, the *Medical Corps* now sends hot tea, flavor with a small amount of brandy, to the front lines twice daily—a most welcome potion, which the soldiers look forward to with eagerness. The prevailing idea of the French Medical Corps is to make the fighting men feel and know that their comfort is being looked after and that everything is being done to mitigate the hardships under which they live. The French are strong believers in the personal element—the little acts of kindness, even of tenderness towards the individual soldier which have helped to keep up both his fighting spirit and his mental serenity. The *'tisaneries'* as the hot tea stations are called did not come into existence as the result of army orders; they represent a voluntary contribution to the soldier on the part of the Medical Corps. Begun in a small way, it was soon noticed that, where the *tisaneries* existed and the regimental kitchens were installed near enough to the trenches so that the food reached the soldier hot, the morale and fighting edge were of the finest."

THE NATURE OF WOUND SHOCK.

W. B. Cannon (Boston) at the front in France (*Journal A. M. A.*, March 2, 1918), reviews the theories that have been advanced as to the nature of wound shock. He finds objections to Henderson's acapnia theory and the idea of suprarenal exhaustion, as well as the nerve exhaustion theory advanced by Crile, and gives the reasons as shown in the experimental work reported by various authorities. The cardiac factor is also not a primary one as has been shown experimentally. The problem of the lost blood in the shocked indivudual is at least partially solved by the congestion of the capillaries and is further supported by the possibility of the concentration of the blood. There are other conditions besides a low blood pressure that are favorable to capillary stagnation of the corpuscles, such as the vicosity factor and the effects of acidosis on the circulation. There are also various vicious circles in the effects of shock on the circulation, and these are enumerated. Cannon proposes a change in the nomenclature using for wound shock the term "exemia," a word used by Hippocrates signifying "drained of blood." A general statement offered by Cannon is as follows: "There are primary wound shock with rapid lowering of arterial pressure, and secondary wound shock with toxemia and hemorrhage, and later lowering of the pressure. Sweating occurs, leading to loss of fluid and loss of heat from the body. The blood becomes stagnant and concentrated in the capillaries, and as the blood pressure falls there is loss of the alkali reserve of the blood (acidosis) roughly corresponding to the drop in pressure." The facts are fully listed in the closing paragraphs of the article, and he concludes as follows:

"This conception of the events that take place in a wounded man who passes into shock gives a reasonable account of the primary effect of wounds, the influence of cold in continuing the low blood pressure or inducing it when the circulatory apparatus is unstable, the influence of warmth in restoring him in part to a fit condition, and the slowness of a full recovery. It leaves unsettled the occasion for the primary fall of pressure, though the suggestion is offered that it may be of reflex character, similar to fainting. The conception offers a hopeful outlook for the care of the shocked man, because two of the most potent factors making his chances unfavorable, cold and acidosis, can be controlled."

COUNCIL OF PHARMACY AND CHEMISTRY.

During February the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

The Abbott Laboratories: Chlorcosane, Barbital-Abbott, Procaine-Abbott.

Dermatological Research Laboratories, Philadelphia Polyclinic: Arsenobenzol (Dermatological Research Laboratories) 1 gm. ampules.

Eli Lilley and Company: Typhoid Vaccine, Prophylactic; Typhoid Vaccine, Therapeutic; Typhoid Mixed Vaccine, Lilly.

Merck and Company: Mercury Benzoate-Merck.

Monsanto Chemical Works: Halazone-Monsanto.

H. K. Mulford Company: Bulgarian Bacillus, Friable Tablets.

W. A. Puckner, Secretary.

NEW AND NON-OFFICIAL REMEDIES.

Barbital. Diethyl-Barbituric Acid, first introduced under the name veronal. In small doses barbital is a relatively safe hypnotic, but fatalities have followed its indiscriminate use. It is claimed to be useful in simple insomnia, as well as in that accompanying hysteria, neurasthenia and mental disturbances. From 0.3 to 1 gm. (5 to 15 grains) in hot water, tea or milk, or, if in wafers or capsules, followed by a cupful of some warm liquid.

Barbital-Abbott. A brand of barbital complying with the New and Non-official Remedies standards. The Abbott Laboratories, Chicago.

Mercury-Benzoate-Merck. A brand of mercuric benzoate complying with the New and Non-official Remedies standards. Mercuric benzoate has the properties of mercuric chloride. It has been said to be useful for hypodermic use and in gonorrhea. Merck and Company, New York.

Chlorcosane. A liquid obtained by chlorinating solid paraffin. It contains about 50 per cent. of chlorin in stable combination. Chlorcosane is used as a solvent for dichloramine-T; with it solutions containing as much as 8 per cent. may be prepared. When used in a hand atomizer, chlorcosane solutions of dichloramine-T may be made less viscous by the addition of 10 per cent. of carbon tetrachloride. The Abbott Laboratories, Chicago.

Betanaphthyl Salicylate-Calco. A brand of betanaphthyl salicylate complying with the New and Non-official Remedies standards. Betanaphthyl salicylate is believed to act as an intestinal antiseptic and, being excreted in the urine, to act in a similar way in the bladder. It is said to be useful in intestinal fermentations, catarrh of the bladder, particularly gonorrheal cystitis, rheumatism, etc. The Calco Chemical Co., Bound Brook, N. J.

Acetylsalicylic Acid-Merck. A brand of acetylsalicylic acid complying with the New and Non-official Remedies standards. Acetylsalicylic acid is employed in rheumatic conditions, and especially as an analgesic and antipyretic in colds, neuralgias, etc.

Chlorazene Surgical Powder. An impalpable powder composed of chlorazene, 1 per cent.; zinc stearate, 10 per cent., and sodium stearate, 89 per cent. Chlorazene Surgical Powder is absorbent, slightly astringent, and forms a closely adherent film when applied to the skin. It may be dusted freely over denuded or abraded areas, cuts, wounds, and skin eruptions. The Abbott Laboratories, Chicago, (*Jour. A. M. A.*, Feb. 16, 1918, p. 459).

PROPAGANDA FOR REFORM.

Phenalgin and Ammonol. At the time that synthetic chemical drugs were coming into fame and when every manufacturer who launched a new headache mixture claimed to have achieved another triumph in synthetic chemistry, Ammonol and Phenalgin were born and duly christened with chemical formulas. However, one of the first reports of the Council on Pharmacy and Chemistry showed them to be mixtures composed of acetanilid, sodium bicarbonate and ammonium carbonate. Since then the unwarranted claims made for these preparations have been exposed repeatedly, and the danger of the indiscriminate use of headache mixtures pointed out. Despite the exposure of the methods used in exploiting Ammonol and Phenalgin, one finds just as glaringly false statements made in the advertisements of Phenalgin today as were made in its unsavory past. This would seem to indicate either that physicians have short memories or that they are strangely indifferent to the welfare of their pa-

tients, to their own reputation, and to the good name of medicine (*Jour. A. M. A.*, Feb. 2, 1918, p. 337).

Absorption and Excretion of Mercury. It may be regarded as clearly established that, in addition to the kidneys, the stomach may participate in this eliminatory function quite as well as the other portions of the alimentary tract. The occurrence of severe intoxications from the use of mercuric chloride in vaginal douches is likewise recognized. The absorption of mercury through the sound skin has been in dispute. To account for the efficacy of mercurial inunction, the contention has been made that the mercury thus applied is volatilized and absorbed through the lungs in greater part if not entirely. Experiments in the dermatologic laboratories of the Philadelphia Polyclinic leaves little doubt that the skin is an important, perhaps the most important, path of absorption of mercury applied by inunction (*Jour. A. M. A.*, Feb. 9, 1918, p. 392).

Basy Bread. This is an asserted obesity cure put out by the Doctors' Essential Food Company, Orange, N. J. The advertising claims are extravagant and typical of other obesity treatment literature. Analyses indicated that in composition Basy Bread was similar to graham bread. Basy Bread sells for $1 a loaf. Dr. Wiley well sums up the case thus: "There is one way in which Basy Bread will reduce, that is, don't eat any of it nor much of it nor much of any other kind." (*Jour. A. M. A.*, Feb. 9, 1918, p. 407).

Campho-Phenique. The Secretaty of the Harvard University Medical School received, from the Campho-Phenique Company of St. Louis, a letter stating that the concern wishes to supply the senior students of all Medical Colleges with samples of Campho-Phenique and Campho-Phenique powder, and ointment and asking the number of students and the name of every student in the graduating class. The Campho-Phenique concern believes in following the old advice, "Catching them young." In 1907, the Council on Pharmacy and Chemistry reported that Campho-Phenique (liquid) was exploited under a false "formula," that it was a solution of camphor and phenol in liquid petrolatum, and that for all practical purposes Campho-Phenique Powder was essentially a camphorated talcum powder containing apparently sufficient phenol and camphor to give the powder an odor. The report of the Council further brought out that the Campho-Phenique Company was in effect one of the numerous trade names adopted by one James F. Ballard. Mr. Ballard seems to market a number of "patent medicines," for some of which Dr. Ballard has pleaded guilty in the federal courts to making false and fraudulent claims (*Jour. A. M. A.*, Feb. 9, 1918, p. 408).

Sodium Bicarbonate. Few patients will object to the taste of sodium bicarbonate if the required dose is administered dissolved in a convenient quantity of cold water. The taste may be disguised by dissolving the sodium bicarbonate in carbonated water or else by adding a little sugar and lemon juice to ordinary water. Sodium bicarbonate may also be prescribed in the form of tablets. Though it is better that these be allowed to dissolve in the mouth, in most cases they are swallowed without discomfort (*Jour. A. M. A.*, Feb. 9, 1918, p. 410).

Acetylsalicylic Acid and Phenyl Salicylate Incompatible with Alkalies. In the presence of moisture, acetylsalycylic acid is decomposed by magnesium oxide (calcined magnesia), as is also phenyl salicylate (salol). Hence these drugs should not be combined with magnesium oxide in a prescription (*Jour. A. M. A.*, Feb. 9, 1918, p. 410).

Fellows' Syrup, and other Preparations of the Hypophosphites. An advertisement for Fellows' Syrup reads: "Fellows' Syrup differs from other preparations of the hypophosphites. Leading clinicians in all parts of the world have long recognized this important fact. Have you? To insure results, prescribe the geniune recipe Syr. Hypophos. Comp. Fellows'. Reject cheap and inefficient substitutes. Reject preparations 'just as good.'" In truth, Fellows' Syrup is not like the better preparations of this type, since after standing it contains a muddy looking deposit that any pharmaceutical tyro would be ashamed of. Examination of the literature used in the exploitation of Fellows' Syrup fails to disclose any evidence to show that it has therapeutic value. Not only is there an entire absence of any evidence of its therapeutic value, but there is an abundance of evidence that the hypophosphites are devoid of any such therapeutic effects as they were formerly reputed to have, and that they are, so far as any effect based on their phosphorus content is concerned, singularly inert. As the result of its investigation of the therapeutic effects of the hypophosphites, the Council on Pharmacy and Chemistry concluded: There is no reliable evidence that they exert a physiologic effect: it has not been demonstrated that they influence any pathologic process; they are not "foods." If they are of any use, that use has never been discovered (*Jour. A. M. A.*, Feb. 16, 1918, p. 478).

Calcium Iodide in Tuberculosis. There appears to be no work to indicate that the intravenous administration of calcium iodide in tuberculosis is of value. It has not been demonstrated that tuberculosis is associated with a deficiency of calcium. On the other hand, experiments demonstrate that the administration of calcium does not change the calcium content of the blood. Furthermore, there is no evidence to warrant the intravenous administration of iodides (*Jour. A. M. A.*, Feb. 16, 1918, p. 481).

Bell-Ans (Papayans, Bell.) "Are you going to sit there and let the other folks eat up all the good things just because you are afraid to pitch in, when 2 or 3 Bell-Ans taken before and after the meal would enable you to enjoy your share of all that's coming without a bit of discomfort or distress. Bell-Ans has restored the pleasures of the table to thousands who say: 'I can now eat anything and plenty of it, too'." The New York Tribune comments that such advertisement as this is not limited to the evil effects to the misguided individual who eats lobster and ice cream at midnight and trusts to Bell-Ans to atone for his inoiscretion. The most serious effect of such reckless advice is the example which the advertising sets to other advertisers (*Jour. A. M. A.*, Feb. 23, 1918, p. 557).

NEW BOOKS

DISEASES OF THE SKIN.

By Milton B. Hartzell, A. M., M. D., LLD., Professor of Dermatology, University of Penn. Price $7.00. J. B. Lippencott Co., 1917.

This is a well arranged text with 51 excellent colored plates and 242 fairly representative illustrations. The type is clear and well arranged for both student and practitioner.

Reviewing this book with the eye of a critic, would say that in regard to treatment for the geral practitioner it is rather brief. Also from the standpoint of the young progressive dermatologist, he has neglected the consideration of several rational theories as regards the etiology of certain diseases. In his favorable mention of Radium for the treatment of Epitheliomas, Lupus, Angiomas, etc., he is entirely too brief. E. S. Lain.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE.

A Text-Book of the Practice of Medicine, by James M. Anders, M. D., Ph. D., LL. D., Professor of Medicine and Clinical Medicine, Medico-Chirurgical College Graduate School, University of Pennsylvania, thirteenth edition thoroughly revised with the assistance of John H. Musser, Jr., M. D., Associate in Medicine, University of Pennsylvania. Octavo of 1259 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $6.00 net; half Morocco, $7.50 net.

Anders' Practice, for years, has been recognized as the standard for American practitioners. Really there is no use for new editions, except to chronicle the rapid changes occurring in American Medicine, for that matter in World Medicine. Conservative and proper always, yet the worthy improvements of aid to the general practitioner are noted and their valuation stated.

Among the newer things noted in this edition are: "Treatment of Tetanus," "Acidosis (in Diabetes)"; "Treatment of Asthma"; "Functional Tests of Hepatic Insufficiency"; "Estimation of Renal Function"; and many other subjects. Many phases have been rewritten. Among these are: "Prophylactic Vaccination"; "Specific Therapy in Typhoid Fever"; and so many other matters that lack of space prohibits their notation here.

The work remains a standard for the practitioner and a reliable guide to the harried practitioner.

MILITARY WAR MANUALS.

MILITARY ORTHOPEDIC SURGERY.

Medical War Manual No. 4. Authorized by the Secretary of War and Under the Supervision of the Surgeon-General and the Council of National Defense. Prepared by the Orthopedic Council. Illustrated. Price $1.50. Lea and Febiger: Philadelphia and New York, 1918.

Orthopedic Council, Majors Elliott G. Brackett, Joel E. Goldthwait and David Silver, Medical Reserve Corps, Major Fred H. Albee, Drs. G. Gwilym Davis, Albert H. Freiberg, Robert W. Lovett and John L. Porter.

MILITARY OPHTHALMIC SURGERY.

War Manual No. 3. By Allen Greenwood, M. D., Major M. R. C., G. E. De Schweinitz, M. D., Major M. R. C., and Walter R. Parker, M. D., Major M. R. C. Illustrated. Price $1.50. Lea and Febiger: Philadelphia and New York, 1917.

These war manuals are becoming highly prized by men in the service on account of their compactness and consequent accessibility. They bear the stamp of approval of the War Department and carry the generally adopted views of their well known authors on the subjects considered.

AMERICAN ADDRESSES ON WAR SURGERY.

By Sir Berkeley Moynihan, C. B., Temporary Colonel, A. M. S., Consulting Surgeon, North Command. 12mo. of 143 pages. Philadelphia and London: W. B. Saunders Company, 1917. Cloth. $1.75 net.

Sir Berkeley Moynihan is eminently fitted to discuss phases of the War of interest to the physician as well as to the layman. His mastery address on the "Causes of the War" ranks with the statements made by any of the great men of the world on the subject. The volume in addition to that address contains chapters dealing with "Gunshot Wounds and Their Treatment," "Wounds of the Knee-Joint," "On Injuries to the Peripheral Nerves and Their Treatment," and "Gunshot Wounds of the Lungs and Pleura."

At this time a statement from such an authority, who has had almost unlimited opportunities for observing actual conditions from the front line dressing stations to the Base Hospital at home, carries with it great interest. The book will be read by thousands of our men now engaged in the Military Service and those who are contemplating service in the future.

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Address all communications to the Secretary, Dr. J. J. Williams, Weatherford.